V. *A ſhort Account of the Cauſe of the Saltneſs of the Ocean, and of the ſeveral Lakes that emit no Rivers; with a Propoſal, by help thereof, to diſcover the Age of the World.* *Produced before the* Royal-Society *by* Edmund Halley, R. S. Secr.

THere have been many Attempts made and Propoſals offered, to aſcertain from the Appearances of Nature, what may have been the Antiquity of this Globe of *Earth*; on which, by the Evidence of Sacred Writ, *Mankind* has dwelt about 6000 Years; or according to the *Septuagint* above 7000. But whereas we are there told that the Formation of *Man* was the laſt Act of the *Creator*, 'tis no where revealed in Scripture how long the *Earth* had exiſted before this laſt Creation, nor how long thoſe five Days that preceeded it may be to be accounted; ſince we are elſewhere told, that in reſpect of the Almighty a thouſand Years is as one Day, being equally no part of *Eternity*; Nor can it well be conceived how thoſe Days ſhould be to be underſtood of natural Days, ſince they are mentioned as Meaſures of Time before the Creation of the Sun, which was not till the Fourth Day. And 'tis certain *Adam* found the *Earth*, at his firſt Production, fully repleniſhed with all ſorts of other *Animals*. This Enquiry ſeeming to me well to deſerve Conſideration, and worthy the Thoughts of the *Royal Society*, I ſhall take leave to propoſe an Expedient for determining the Age of the World by a *Medium*, as I take it, wholly new, and which in my Opinion ſeems to promiſe ſucceſs, though the Event cannot be judged of till after a long Period of Time; ſubmitting the ſame to their better Judgment.

ment. What ſuggeſted this *Notion* was an Obſervation I had made, that all the *Lakes* in the *World*, properly ſo called, are found to be *Salt*, ſome more ſome leſs than the Ocean Sea, which in the preſent caſe may alſo be eſteemed a *Lake*; ſince by that term I mean ſuch ſtanding Waters as perpetually receive Rivers running into them, and have no Exite or Evacuation.

The Number of theſe Lakes, in the known Parts of the World is exceeding ſmall, and indeed upon Enquiry I cannot be certain there are in all any more than four or five, *viz.* firſt, The *Caſpian Sea*; ſecondly, The *Mare Mortuum* or *Lacus Aſphaltites*; thirdly, The Lake on which ſtands the City of *Mexico*, and fourthly, The Lake of *Titicaca* in *Peru*, which by a Channel of about fifty Leagues communicates with a fifth and ſmaller, call'd the Lake of *Paria*, neither of which have any other Exite. Of theſe the *Caſpian*, which is by much the greateſt, is reported to be ſomewhat leſs ſalt than the Ocean. The *Lacus Aſphaltites* is ſo exceedingly Salt, that its Waters ſeem fully ſated, or ſcarce capable to diſſolve any more; whence in Summer-time its Banks are incruſtated with great Quantities of dry *Salt*, of ſomewhat a more pungent nature than the *Marine*, as having a Reliſh of *Sal Armoniac*; as I was informed by a curious Gentleman that was upon the place.

The *Lake* of *Mexico* properly ſpeaking is two Lakes, divided by the *Cauſways* that lead to the *City*, which is built in Iſlands in the midſt of the *Lake*, undoubtedly for its Security; after the Idea, tis probable, its firſt Founders borrowed from their *Beavers*, who build their Houſes on Damms they make in the Rivers after that manner. Now that part of the *Lake* which is to the Northwards of the *Town* and *Cauſways*, receives a River of a conſiderable magnitude, which being ſomewhat higher than the other, does with a ſmall Fall exonerate it ſelf in the Southern

part, which is lower. Of theſe the lower is found to be ſalt, but to what degree I cannot yet learn; though the upper be almoſt freſh.

And the Lake of *Titicaca*, being near eighty Leagues in circumference, and receiving ſeveral conſiderable freſh Rivers, has its Waters, by the Teſtimony of *Herrera* and *Acoſta*, ſo brackiſh as not to be potable, though not fully ſo ſalt as that of the Ocean; and the like they affirm of that of *Paria*, into which the Lake of *Titicaca* does in part exonerate it ſelf, and which I doubt not will be found much ſalter than it, if it were enquired into.

Now I conceive that as all theſe Lakes do receive Rivers and have no *Exite* or Diſcharge, ſo 'twill be neceſſary that their Waters riſe and cover the Land, until ſuch time as their Surfaces are ſufficiently extended, ſo as to exhale in Vapour that Water that is poured in by the Rivers; and conſequently that Lakes muſt be bigger or leſſer according to the Quantity of the freſh they receive. But the Vapours thus exhaled are perfectly freſh, ſo that the ſaline Particles that are brought in by the Rivers remain behind, whilſt the freſh evaporates; and hence 'tis evident that the Salt in the Lakes will be continually augmented, and the Water grow ſalter and ſalter. But in Lakes that have an *Exite*, as the Lake of *Geneſaret*, otherwiſe call'd that of *Tiberias*, and the upper Lake of *Mexico*, and indeed in moſt others, the Water being continually running off, is ſupply'd by new freſh river Water, in which the ſaline Particles are ſo few as by no means to be perceived.

Now if this be the true Reaſon of the Saltneſs of theſe Lakes, tis not improbable but that the Ocean it ſelf is become ſalt from the ſame Cauſe, and we are thereby furniſhed with an Argument for eſtimating the Duration of all Things, from an Obſervation of the Increment of Saltneſs in their Waters. For if it be obſerved what Quantity of Salt is at preſent contained in a certain Weight of the

Water of the *Caſpian Sea*, for example, taken at a certain Place, in the dryeſt Weather; and after ſome Centurys of Years the ſame Weight of Water, taken in the ſame place and under the ſame Circumſtances, be found to contain a ſenſibly greater Quantity of Salt than at the time of the firſt Experiment, we may by the Rule of Proportion, take an eſtimate of the whole time wherein the Water would acquire the Degree of Saltneſs we at preſent find in it.

And this Argument would be the more concluſive, if by a like Experiment a ſimular Encreaſe in the Saltneſs of the *Ocean* ſhould be obſerved: for that, after the ſame manner as aforeſaid, receives innumerable Rivers, all which depoſite their ſaline Particles therein; and are again ſupplyed, as I have elſewhere ſhewn, by the *Vapours* of the *Ocean*, which riſe therefrom in Atoms of pure Water, without the leaſt admixture of Salt. But the Rivers in their long Paſſage over the Earth do imbibe ſome of the ſaline Particles thereof, though in ſo ſmall a Quantity as not to be perceived, unleſs in theſe their Depoſitories after a long Tract of time. And if upon repeating the Experiment, after another equal Number of Ages, it ſhall be found that the Saltneſs is further encreaſed with the ſame Increment as before, then what is now propoſed as *Hypothetical* would appear little leſs than Demonſtrative. But ſince this Argument can be of no uſe to Ourſelves, it requiring very great Intervals of time to come to our Concluſion, it were to be wiſhed that the ancient *Greek* and *Latin* Authors had delivered down to us the degree of the Saltneſs of the Sea, as it was about 2000 Years ago: for then it cannot be doubted but that the Difference between what is now found and what then was, would become very ſenſible I recommend it therefore to the *Society*, as opportunity ſhall offer, to procure the Experiments to be made of the preſent degree of Saltneſs of the Ocean, and of as many of theſe Lakes as can be

come at, that they may ſtand upon Record for the benefit of future Ages.

If it be objected that the Water of the *Ocean*, and perhaps of ſome of theſe *Lakes*, might at the firſt Beginning of Things, in ſome meaſure contain Salt, ſo as to diſturb the Proportionality of the Encreaſe of Saltneſs in them, I will not diſpute it: But ſhall obſerve that ſuch a Suppoſition would by ſo much contract the Age of the World, within the Date to be derived from the foregoing Argument, which is chiefly intended to refute the ancient Notion, ſome have of late entertained, of the Eternity of all Things; though perhaps by it the World may be found much older than many have hitherto imagined.

Accounts of BOOKS.

I. Linear Perſpective, *or a New Method of repreſenting juſtly all manner of Objects*, &c. *By* Brook Taylor, *L. L. D. and R. S. Secr.* 8vo. London, 1715.

THE Author of this Book, finding the Art of Perſpective to be very imperfect in the Books that have hitherto been publiſh'd on that Subject, thought it worth his while to conſider the whole matter anew; and from a careful Examination of the Principles this Art is founded upon, he has endeavoured to eſtabliſh ſome Theorems, by means of which the Practice of it might be render'd more general and eaſy than has yet been done. In order to this, at firſt ſight he found it neceſſary to make uſe of new Terms of Art; the old ones ſeeming not to